

PRD-2511

April 16, 2004
Work Plan 0278.W3
RGA Job # PRD9827

Ms. Eva Chu
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577



SUBJECT: CORRECTIVE ACTION WORK PLAN
Pacific Rolling Door
15900 Worthley Drive
San Lorenzo, CA

Dear Ms. Chu:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for the excavation and disposal of lead contaminated surface soil. Excavation will occur to a depth of approximately 1.5 feet below ground surface, the depth of gravel fill, in an area that includes all sampling locations shown to be over the San Francisco Bay Regional Water Quality Control Board (SF-RWQCB) Environmental Screening Level (ESL) for lead in shallow soil at commercial or industrial properties. This work plan is prepared in response to conversations with Ms. Eva Chu of the Alameda County Department of Environmental Health (ACDEH) following her review of RGA's Subsurface Investigation Report (0278.R3) dated May 16, 2003 for the subject site, and following conversations with Ms. Betty Graham of the SF-RWQCB regarding SF-RWQCB guidelines and accepted standard practices for remediation of lead contamination in shallow soil. The depth of gravel fill at the previous outdoor borehole locations is shown in Figure 1. Total lead concentrations at each of the previous outdoor borehole locations are shown in Figure 2. The proposed excavation footprint is shown in Figure 3. All work will be performed under the direct supervision of a California registered geologist.

BACKGROUND

The site consists of a large warehouse in an industrial area of San Lorenzo, California. The site is bordered to the northeast by railroad tracks, to the southeast and northwest by industrial facilities, and to the southwest by Worthley Drive. Based on conversations with Mr. Jerry Duncan of Pacific Rolling Door (PRD), the subject site was farmland until approximately 1961. PRD occupied the site in approximately 1961 and constructed a warehouse for metal rolling door manufacturing. Spray-painting operations have been performed for a number of years on an outdoor paint rack and in an open shed previously located in the storage yard between the back of the building and the railroad tracks (see Figure 1). The spray painting operations have included lead-based paint and zinc primer.

In the 1980's, the back of the existing building was extended 100 feet towards the railroad tracks. It is our understanding that at that time, the paint racks and open shed were relocated from the back of the original building footprint approximately 100 feet towards the railroad tracks. The

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ground surface cover at the site consists of concrete on the southeast side of the building from the front to the back of the building. From the back of the building to the railroad tracks, the ground surface is covered with gray gravelly fill measuring approximately 11 to 18 inches in thickness. Mr. Duncan stated that the area behind the building was initially bare earth, and that the gravel was periodically added over time to increase the gravel layer thickness. A chain link fence runs around the entire site at the property line.

In 1995, a total of five soil samples designated as TB1 through TB5 were collected by RGA at a depth of 0.5 to 1.0 feet below the ground surface. The samples were analyzed for Volatile Organic Compounds (VOCs) using EPA Method 8010 and for CAM 17 metals. The laboratory results showed that VOCs were not detected and that lead was detected in all of the boreholes and zinc was detected in one of the boreholes at concentrations exceeding ten times their respective Soluble Threshold Limit Concentration (STLC) values. No Waste Extraction Tests (WETs) were performed. Based on the laboratory results, RGA recommended additional analysis for lead, mercury, and zinc. The sample collection locations are shown on Figure 1. Documentation of the investigation and laboratory results is presented in RGA's Preliminary Subsurface Investigation report dated May 1, 1995.

In 2002, PRD requested that RGA return to the site to further investigate the extent of metals in soil at the site. On July 18, 2002 a total of nine soil borings, designated as borings B6 through B14, were hand augered to further investigate concentrations of lead, zinc, and mercury at the site. The July 18, 2002 investigation of these metals in the vicinity of the paint rack identified only lead at concentrations of concern. The elevated concentrations of lead appear to be limited to the clayey gravel layer which covers the ground surface behind the facility building, and which measures between 11 and 18 inches in thickness. Analysis of soil samples collected beneath the clayey gravel at a depth of 2.0 feet showed that the elevated lead concentrations appear to be limited to the clayey gravel. WET analysis on samples collected in the clayey gravel where the TTLC value exceeded ten times the lead STLC value showed that 3 of the 6 samples had concentrations which would cause the clayey gravel to be considered hazardous waste if removed from the site for disposal. The sample collection locations are shown on Figure 1. Documentation of the investigation and laboratory results is presented in RGA's Subsurface Investigation Report (0278.R1) dated August 19, 2002.

Following the 2002 investigation, the presence of lead, zinc, and VOCs was investigated in the vicinity of the former paint racks, now located beneath the 1984 building addition. This work was performed in accordance with RGA's Subsurface Investigation Work Plan dated March 18, 2003, and Work Plan Addendum dated March 31, 2003 for boreholes B15 through B23. Written approval of the work plan and work plan addendum was provided by Ms. Eva Chu of the Alameda County Department of Environmental Health (ACDEH) in a letter dated April 3, 2003. In the approval letter, it was suggested that additional soil samples be collected outside the building to further define the extent of lead in soil. In response to this suggestion, a map showing boring locations B24 through B39 outside the building was provided to Ms. Chu for review. On

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April 4, 2003 Ms. Chu approved the outside proposed borehole locations contingent upon moving borehole B31 closer to the building.

The subsequent investigation on April 8, 2003 of lead in the vicinity of the paint rack behind the site building, as well as lead, zinc, and VOCs underneath the 1984 building addition, identified lead and VOCs at concentrations of concern at one location inside the building (borehole B23), and lead outside the building in the surface gravel layer at various locations. Documentation of the laboratory results is presented in RGA's Subsurface Investigation Report (0278.R2) dated May 16, 2003.

Following review of the results for samples collected from boreholes B15 through B39, Ms. Chu request additional investigation of lead and VOCs in groundwater, and suggested additional outdoor soil sampling event to define the area requiring remediation in a telephone conversation on May 12, 2003. In response, RGA prepared Subsurface Investigation Work Plan (0278.W2) dated June 26, 2003, and our Work Plan Addendum dated July 7, 2003 for additional subsurface investigation of lead and VOCs in soil and groundwater at the subject site. Written approval of the work plan addendum was provided by the ACDEH in an email message dated July 22, 2003.

In accordance with the work plan and addendum, boreholes B40 through B53 were drilled on August 5, 2003. The laboratory results for the two soil samples collected beneath the gravel fill in the back yard of the site building on August 5, 2003 show that total lead was not detected in one sample and detected at 3.3 mg/kg in the other sample. Concentrations of lead above the ESL of 750 ppm were detected only in the surface gravel fill in a 90-foot by 35-foot area abutting the back of the site building, and at an individual sampling location beneath the former paint racks that were removed in 2003. The depths of gravel fill at the borehole locations are shown in Figure 1. Total lead concentrations at each of the outdoor borehole locations are shown in Figure 2. The area with lead contamination above 750 ppm in surface soil will be excavated to a depth of 1.5 feet, and backfilled with uncontaminated material. Figure 3 shows the proposed excavation footprint.

SCOPE OF WORK

In order to remediate lead contamination in the surface soil at the subject site, RGA will perform the following tasks:

- Health and safety plan preparation.
- Underground utility location.
- Coordinate excavation of approximately 325 tons of lead-impacted surface soil (an area approximately 4,450 square feet in size to a depth of 1.5 feet).*
- Collect soil samples as follows:
 - Confirmation - collect nine soil samples underneath the excavated area.
 - Waste sampling - collect three four-point composite samples from the stockpiled soil.

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- Arrange for analysis of all twelve (12) soil samples for total lead.
- Coordinate regulatory approval for backfill of the excavated area, and arrange disposal of the excavated soil.
- Prepare a report documenting field activities and the laboratory analytical results. The report will include figures showing the areas of excavation and backfill, as well as sampling locations.

Each of these is discussed below in detail.

Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan.

Underground Utility Location

At least 48 hours prior to the beginning of fieldwork, the area of excavation will be marked with white paint and Underground Service Alert will be contacted in an effort to identify underground utilities in the vicinity of the proposed excavation.

Coordination of Excavation

Following approval of this work plan, field activities will be scheduled with the client, the excavation and backfill contractor, and the laboratory, and notification will be provided to the ACDEH of the scheduled field dates. RGA personnel will perform a site visit to mark an area of approximately 4,450 square feet as the location for excavation. Site access will be arranged for the excavation contractor for soil excavation and stockpiling.

Soil Sample Collection

Following excavation in the designated area, RGA personnel will collect nine discrete samples from the surface soil directly beneath the excavated area, roughly one sample for every 500 square feet of excavated area. In addition, three four-point composite samples will be collected from the stockpiled soil, one composite sample for approximately every 100 cubic yards.

Arrange for Sample Analysis

All samples will be sent to a State-accredited hazardous waste testing laboratory for analysis on a normal (five working day) turn around basis. Each soil sample will be analyzed for total lead by EPA Method 6010. In the event that concentrations of total lead are detected that exceed ten times the Soluble Threshold Limit Concentrations (STLC) value for lead, additional Waste Extraction Test (WET) analysis will be performed for those samples with elevated concentrations of lead.

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Coordination of Disposal and Backfill Activities

The laboratory analytical results for the soil samples will be provided to the excavation contractor for profiling and disposal of the soil at an appropriate facility. Laboratory results will also be provided to the ACDEH, along with figures showing the areas of excavation and confirmation sampling locations. Following ACDEH approval, the excavated area will be backfilled with uncontaminated material, including at least 12 inches of Class II baserock.

Report Preparation

A report will be prepared documenting field activities and the laboratory results. The report will include a figure showing the areas of excavation, disposal manifests for soil from the excavated areas, a figure showing the confirmation sample collection locations, tables summarizing the laboratory results, and recommendations based on the laboratory results. The report will bear the stamp of an appropriately registered professional.

Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Very Truly Yours,

RGA Environmental, Inc.

Wilhelm Weberbach

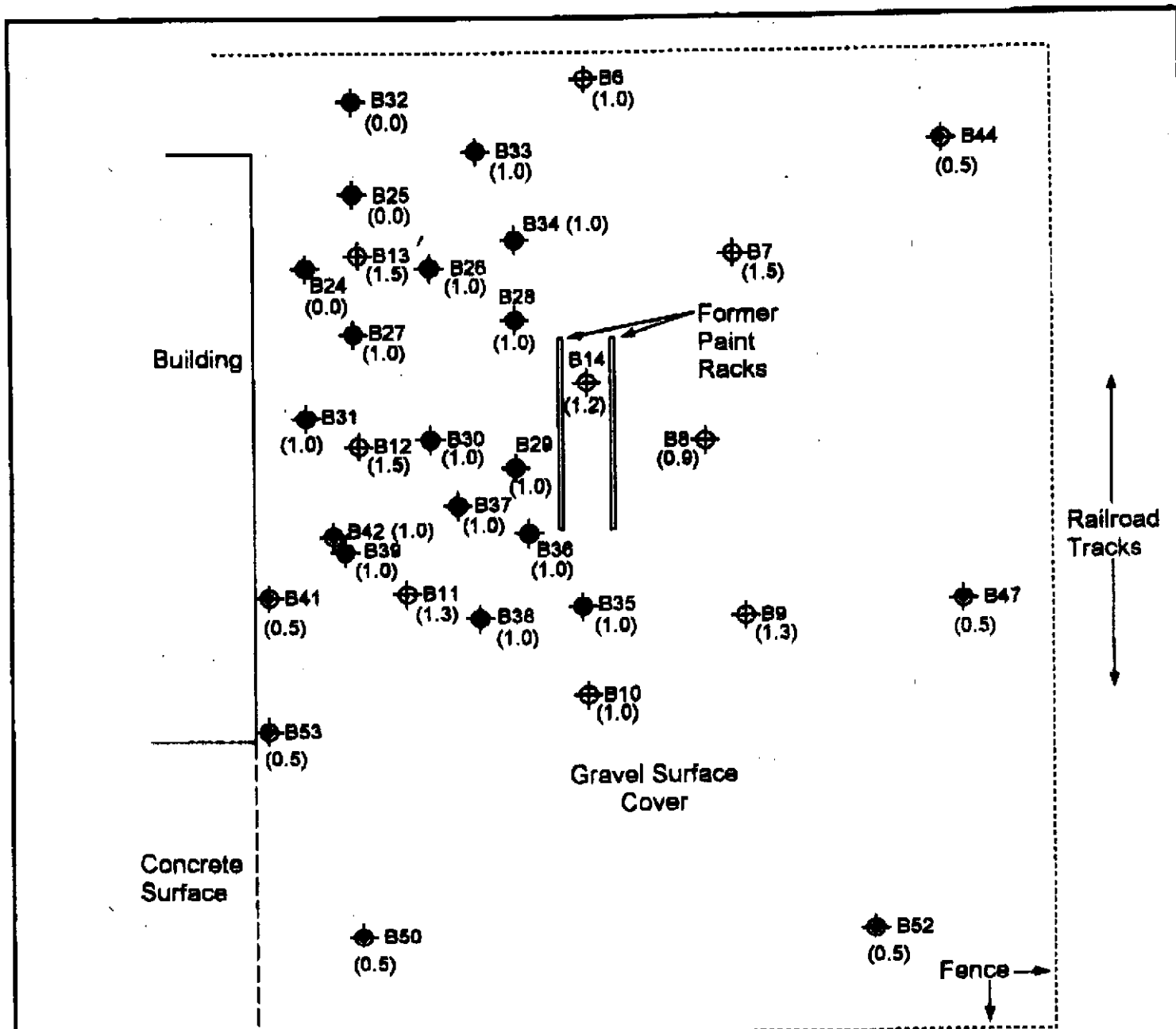
for
Karin Schroeter
Project Manager

Paul H. King

Paul H. King
California Registered Geologist #5901
Expires 12/31/05

Attachment: Figure 1, Site Plan Detail showing the depth of surface gravel layer
Figure 2, Site Plan Detail showing outdoor boring locations, total lead
Figure 3, Site Plan Detail showing the proposed areas of excavation

PHK/wrw
0278.W3



LEGEND

- ⊕ Soil Boring Location (2002 Investigation)
- Soil Boring Location (4/7/03 Investigation)
- ⊙ Soil Boring Location (8/5/03 Investigation)

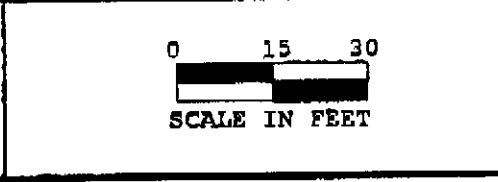
(1.5) Depth of surface gravel layer in feet

FIGURE 1
SITE PLAN DETAIL - DEPTH OF SURFACE GRAVEL LAYER
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California

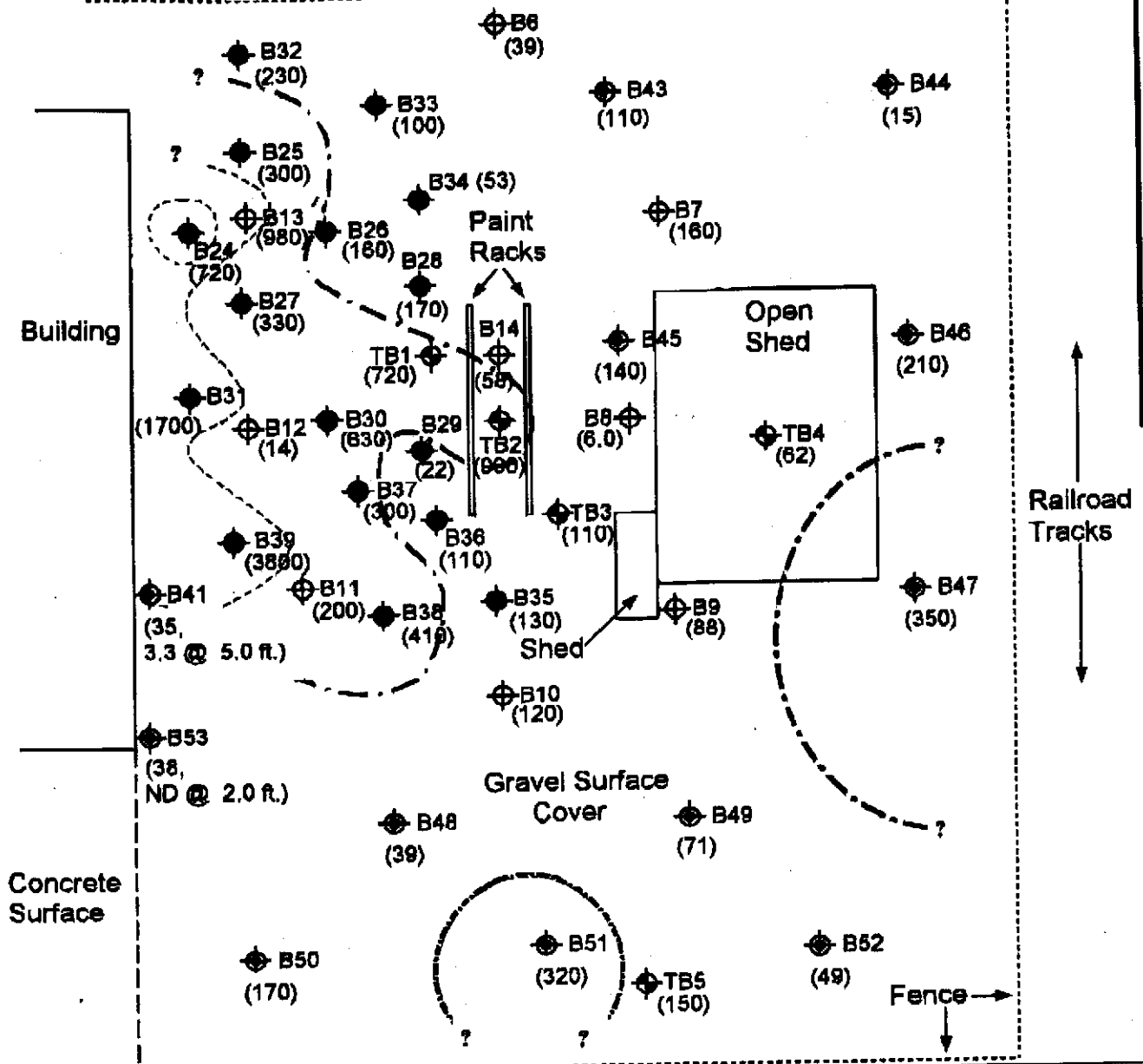


Base Map From:
 RGA Environmental
 July, 2002

RGA Environmental, Inc.
 4701 Doyle Street
 Suite 14
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20-2511



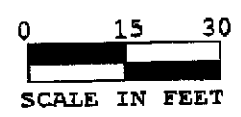
<p>LEGEND</p> <ul style="list-style-type: none"> ◆ Soil Boring Location (1995 Investigation) ⊕ Soil Boring Location (2002 Investigation) ◆ Soil Boring Location (4/7/03 Investigation) 	<ul style="list-style-type: none"> --- 255 mg/kg Total Lead Isoconcentration Contour - - - 750 mg/kg Total Lead Isoconcentration Contour (999) Total Lead Concentration, mg/kg ◆ Soil Boring Location (8/5/03 Investigation)
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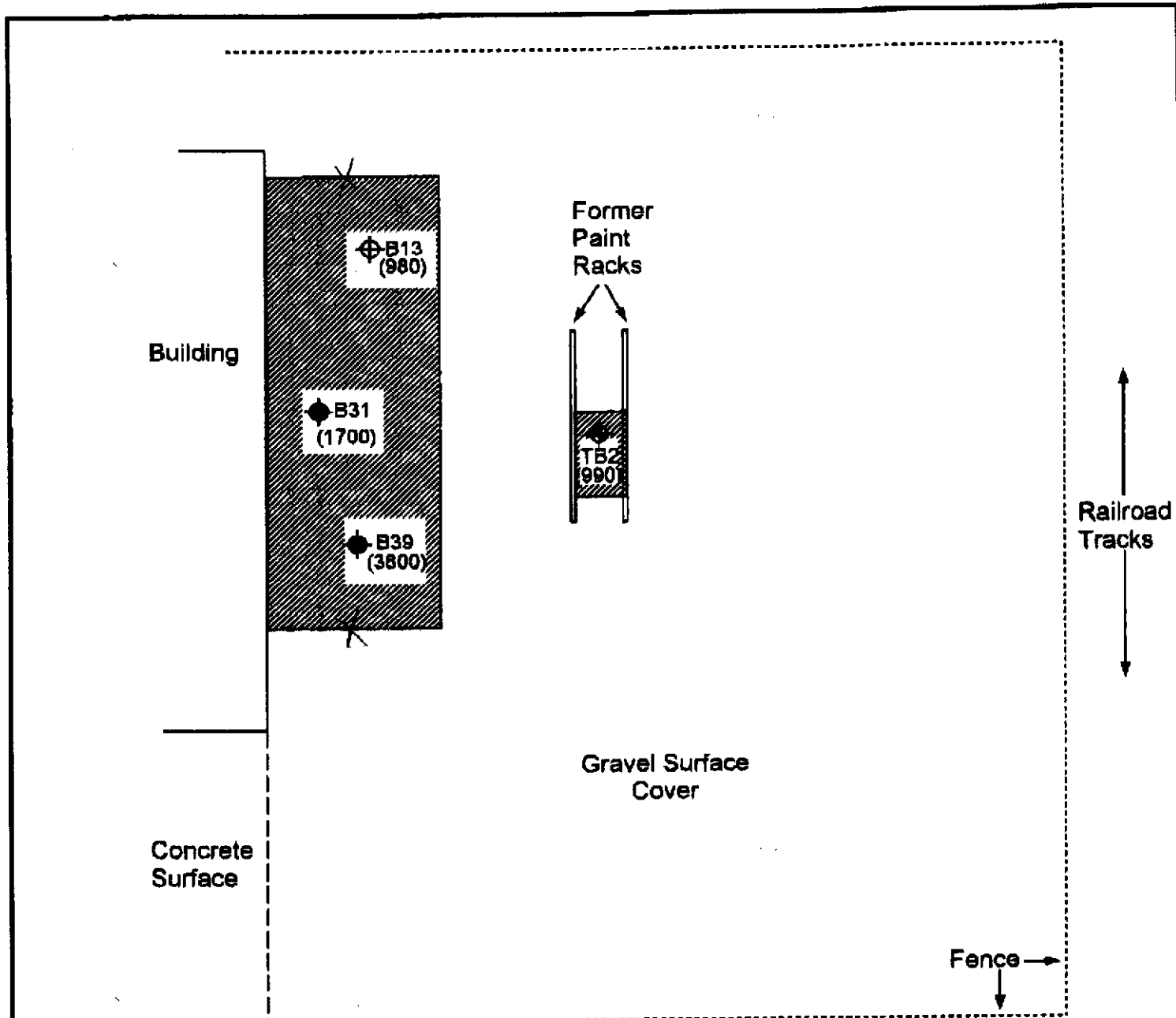
FIGURE 2
SITE PLAN DETAIL - OUTDOOR BORING LOCATIONS, TOTAL LEAD
 Pacific Rolling Door
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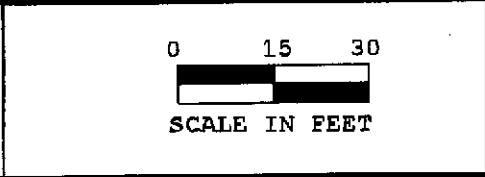
LEGEND	
⊕ Soil Boring Location (1995 Investigation)	(3800) Total Lead Concentration, mg/kg
⊕ Soil Boring Location (2002 Investigation)	▨ Proposed Areas of Excavation
● Soil Boring Location (4/7/03 Investigation)	

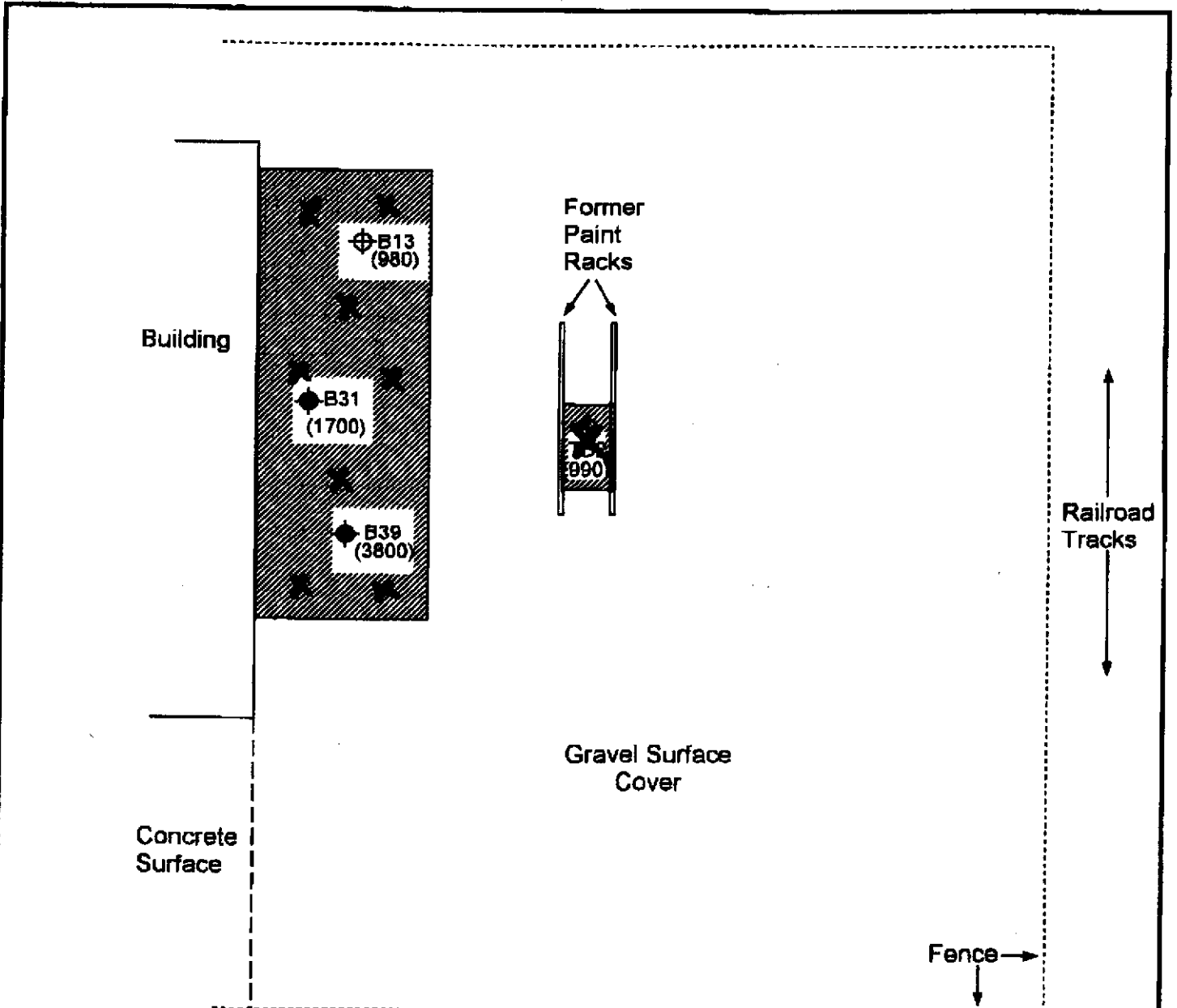
FIGURE 3
SITE PLAN DETAIL - PROPOSED AREAS OF EXCAVATION
 Pacific Rolling Door
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LEGEND	Soil Boring Location (1995 Investigation)	Proposed Confirmation sampling locations
Soil Boring Location (2002 Investigation)	(3800) Total Lead Concentration, mg/kg	
Soil Boring Location (4/7/03 Investigation)	Proposed Areas of Excavation	

FIGURE 3
SITE PLAN DETAIL - PROPOSED AREAS OF EXCAVATION
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